Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**Questions to Go Along with the Unit 8 Notes, Part 1 – The Cell Cycle and Mitosis**

Ms. OK, AP Biology, 2014-2015

1. Compare / contrast intracellular vs. plasma membrane receptors. Where is each receptor located, and what type of signal molecule binds to each receptor?
2. What are the benefits of cell signaling via direct physical contact and cell signaling over short distances (ex: nerve cell signaling)?
3. What are the benefits of cell signaling over long distances (ex: signaling via hormone secretion into the bloodstream)?
4. What is the benefit of using second messengers and phosphorylation cascades during the transduction step of cell signaling?
5. How is the purpose of cell signaling different in unicellular organisms vs. multicellular organisms? Provide an example of each.
6. Describe how epinephrine is used as a signaling molecule to cause the release of glucose from liver cells into the bloodstream. Express your answer as a series of numbered steps.